

REMARKS

Applicants do not concede that any of the claims, prior to the instant amendment, are unpatentable. However, in order to expedite prosecution and remove issues prior to appeal, Applicants have amended independent claims 16 and 27 to include the cracked size limitation recited in claim 10, and cancelled claim 40. Claims 17-20 have also been amended, and claim 28 has been cancelled. Applicants submit that, because the cracked size limitation was already present in the claims, e.g., in claims 10 and 28, it has already considered and does not require further consideration and search. Thus, Applicants respectfully request that the instant amendment be entered.

Applicants submit that the inclusion of the cracked size limitation in all of the independent claims has obviated the rejections in paragraphs 1 and 3-7 of the office action. Thus, only the rejection in paragraph 2 – i.e., the rejection of claim 10 under 35 USC 103(a) as being unpatentable over WO 96/10341 combined with “Applicants’ own Admission” (AOA) -- will be discussed herein.

As explained in Applicants’ previous response, WO 96/10341 does not teach or suggest separating soy germ from cracked soybeans having the claimed particle size distribution. Instead, the soy beans are “broken by a crushing roller to obtain 2 to 20 pieces per seed” (WO 96/10341, Example 1, page 5), a size distribution that corresponds to the conventional cracking process described in Applicant’s specification at p. 2, lines 1-2.

The Examiner appears, based on the Examiner’s remarks at page 4 of the office action, both to doubt that the particle size distribution described by WO 96/10341 is significantly smaller than the claimed particle size distribution, and to attribute little or no importance to the claimed distribution.

Applicants will first address the significance of the claimed particle size distribution, as this is perhaps the threshold question. With regard to the Examiner’s remark that “absent a showing of unexpected results” the particular cracked size would have been obvious, Applicants respectfully submit that they *have* provided evidence of unexpected results. As discussed in

Applicants' specification, Applicants' discovery that soy germ separation could be successfully integrated into a commercial soybean processing facility has allowed soy germ concentrate to be produced at an economically viable cost. Prior to Applicants' invention there was simply no recognition in the industry that soy germ production could be successfully integrated into an existing soybean processing plant. Instead, efforts to obtain soy germ focused on separating a very pure soy germ fraction from a soy bean stream in a dedicated soy germ production process. While such processes do yield a soy germ product, the cost of the product is prohibitive. When the soybean stream is cracked to Applicants' claimed particle size distribution, rather than a smaller size distribution as is conventional, the germ can be separated from the meats by size and the meats then reintroduced into the soybean stream of a conventional soybean processing plant. Thus, this seemingly small change in particle size distribution produces great economic benefits: a processing facility that previously made three products can now produce four products. Moreover, a further unexpected benefit of Applicants' invention is that this additional product – soy germ concentrate – can be manufactured without a significant capital investment and without a significant impact on the cost associated with the original products of the process, soybean oil, solvent laden white flakes and hulls. (See Applicants' specification, p. 3, first and second paragraphs.)

Turning now to the accuracy of Applicants' statements regarding the teachings of WO 96/10341, the Examiner points out that, in Example 1 of WO 96/10341, the broken soybeans are sifted on a screen having apertures of 1-2 mm in diameter. This teaching only indicates that the majority of the broken pieces are larger than 1-2 mm, *not* that about 50% of the cracked particles are larger than 3.35 mm, as claimed. Clearly, every particle in the cracked stream could be, for example, 2.5 mm in size and the broken pieces could still be sifted on a screen having apertures of 1-2 mm in diameter. The Examiner also states that "in the event that seeds are only cracked into two portions per seed...it is likely that what is left would be at least 4 mm in size." If the Examiner is asserting that WO 96/10341 teaches a cracked stream in which the majority of the seeds are cracked into two portions per seed, Applicants respectfully disagree. It would have been well understood by the artisan that the phrase "2 to 20 pieces per seed" was not intended to

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refer to a distribution in which the majority of the particles are halves, but rather to a distribution in which only a small percentage of the particles were halves and most of the particles were much smaller, i.e., less than 3.35 mm. Such an interpretation is consistent with the manner in which this phrase is used in the soybean processing art.

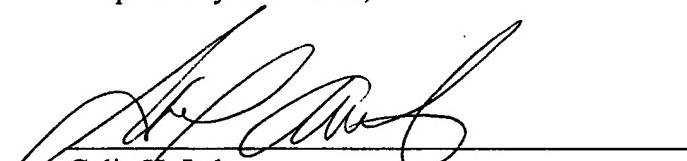
As previously noted, AOA does not add anything of relevance with regard to the particle size distribution of the cracked stream. As discussed in Applicants' specification, conventional soybean processing cracks the soybean meats into quarters and eighths, a distribution significantly smaller than that claimed.

In view of the above, Applicants respectfully request that the rejections under 35 USC 103(a) be withdrawn and all claims be allowed.

Please apply any charges or credits to deposit account 06-1050, referencing Attorney Docket No. 07406-016001.

Respectfully submitted,

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Celia H. Leber
Reg. No. 33,524

Rg No 30, 175

Fish & Richardson P.C.
225 Franklin Street
Boston, MA 02110
Telephone: (617) 542-5070
Facsimile: (617) 542-8906